

### **Amendment to the Drawings**

The attached Replacement Sheets of drawings include changes to FIG. 3 and FIG. 4A.

In FIG. 3, the reference for pitch "L" has been inserted in two places. Support for this insertion is described in the specification on page 9, lines 25-29 as originally filed.

In FIG. 4A, the reference numeral "80" has been changed to --800-- which is representative of the angular diffusion profile.

Attachment: 2 Replacement Sheets  
              2 Annotated Sheets Showing Changes

## **REMARKS**

By this amendment, Figures 3 and 4A, the abstract, and claims 1 and 5 have been amended. Claims 1-11 remain in the application. Support for the amendments to the claims can be found the specification and drawings. No new matter has been added. Reconsideration, and allowance of the application, as amended, is respectfully requested.

### **The Drawings**

The drawings stand objected to as failing to comply with 37 CFR 1.84(p)(5) because the reference sign mentioned in the description, in particular, perceived pitch L was not included in FIG. 3. Applicant respectfully traverses this objection for at least the following reason. By this amendment, FIG. 3 has been amended to include the reference designation for perceived pitch L (two places). Support for this insertion is described in the specification on page 9, lines 25-29 as originally filed. Accordingly, objection of the drawings is now believed overcome.

The drawings stand objected to as failing to comply with 37 CFR 1.84(p)(4) because the reference character "80" has been used to designate both the diffuser and the typical angular diffusion profile. Applicant respectfully traverses this objection for at least the following reason. By this amendment, FIG. 4A (as well as corresponding description in the specification in the paragraph beginning on page 11, line 26 through page 12, line 3) has been amended to change the reference numeral 80 to 800 with respect to identifying the typical angular diffusion profile. Accordingly, the objection of the drawings is now believed overcome and should be withdrawn.

### **Objection to the Specification**

The abstract of the disclosure stands objected to because of the use of legal phraseology. By this amendment, the abstract has been amended. Accordingly, the objection to the specification has been overcome and should be withdrawn.

**Rejection under 35 U.S.C. §102**

Claim 1 recites an electrically controllable light diffuser comprising:

an optical medium and an electro-optic medium arranged with an effective optical interface between a first surface of the optical medium and a first surface of the electro-optic medium; and

transparent electrodes arranged for providing an electric field across the electro-optic medium so as to allow control of the refractive index of the electro-optic medium by application or non-application of an electric field across the electro-optic medium,

wherein one of the first surface of the optical medium and the first surface of the electro-optic medium is structured with a surface profile, the surface profile comprising plural surface angles, wherein the plural surface angles comprise a distribution of facet angles which vary on a scale larger than a diffraction limit, but smaller than a sub-pixel spacing, the distribution configured to provide an effect observed as one of a diffuser with respect to the spacing of sub-pixels, wherein the effective optical interface acts overall as the diffuser, further having an angular diffusion profile with a vertical scattering component of less than one percent (1%) and a horizontal scattering component of approximately ten percent (10%), such that (i) when the refractive index of the electro-optic medium is controlled by application or non-application of an electric field to be substantially equal to the refractive index of the optical medium there is substantially no refraction arising from the effective optical interface between the first surface of the optical medium and the first surface of the electro-optic medium, and such that (ii) when the refractive index of the electro-optic medium is controlled by application or non-application of an electric field to be different from the refractive index of the optical medium refraction does take place at the effective optical interface between the first surface of the optical medium and the first surface of the electro-optic medium and, by virtue of there being plural surface angles, the refraction directs light to a corresponding plurality of angles thereby providing a diffusion effect.

Support for the amendments to claim 1 (as well as for amendments to claim 5), can be found in the specification at least on page 5, lines 13-16; page 12, lines 22-24; page 15, lines 16-20 and 24-26; and FIGs. 3, 4B, and 6.

Claims 1-2 were rejected under 35 U.S.C. § 102(b) as being anticipated by **Shinomiya**, JP 06-265891 A. With respect to claim 1, Applicant respectfully traverses this rejection for at least the following reasons.

The PTO provides in MPEP § 2131 that

*"[t]o anticipate a claim, the reference must teach every element of the claim...."*

Therefore, with respect to claim 1, to sustain this rejection the **Shinomiya** reference must contain all of the above claimed elements of the claim. However, contrary to the examiner's position that all elements are disclosed in the **Shinomiya** reference, the latter reference does not disclose "... plural surface angles comprise a distribution of facet angles which vary on a scale larger than a diffraction limit, but smaller than a sub-pixel spacing, the distribution configured to provide an effect observed as one of a diffuser with respect to the spacing of sub-pixels, wherein the effective optical interface acts overall as the diffuser, further having an angular diffusion profile with a vertical scattering component of less than one percent (1%) and a horizontal scattering component of approximately ten percent (10%) ..." as is specifically recited in claim 1.

Therefore, the rejection is not supported by the **Shinomiya** reference and should be withdrawn. Accordingly, claim 1 is allowable and an early formal notice thereof is requested. Dependent claim 2 depends from and further limits independent claim 1 and therefore is allowable as well. The 35 U.S.C. §102(b) rejection has now been overcome.

### **Rejection under 35 U.S.C. §103**

Claims 5-9 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Van Berkel** (US 2003/0011884 A1) in view of **Shinomiya**, JP 06-265891 A. With respect to claim 5, Applicant respectfully traverses this rejection on the grounds that these references are defective in establishing a prima facie case of obviousness with respect to claim 5.

As the PTO recognizes in MPEP § 2142:

*... The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness...*

It is submitted that, in the present case, the examiner has not factually supported a prima facie case of obviousness for at least the following, mutually exclusive, reasons.

#### **1. Even When Combined, the References Do Not Teach the Claimed Subject Matter**

The **Van Berkel** and **Shinomiya** references cannot be applied to reject claim 5 under 35 U.S.C. § 103 which provides that:

*A patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains ... (Emphasis added)*

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, since neither **Van Berkel** nor **Shinomiya** teaches "... plural surface angles comprise a distribution of facet angles which vary on a scale larger than a diffraction limit, but smaller than a sub-pixel spacing, the distribution

configured to provide an effect observed as one of a diffuser with respect to the spacing of sub-pixels, wherein the effective optical interface acts overall as the diffuser, further having an angular diffusion profile with a vertical scattering component of less than one percent (1%) and a horizontal scattering component of approximately ten percent (10%) ...” as is claimed in claim 5, it is impossible to render the subject matter of claim 5 as a whole obvious, and the explicit terms of the statute cannot be met.

Thus, for this mutually exclusive reason, the examiner’s burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection under 35 U.S.C. §103 should be withdrawn.

## **2. The Combination of References is Improper**

Assuming, arguendo, that none of the above arguments for non-obviousness apply (which is clearly not the case based on the above), there is still another, mutually exclusive, and compelling reason why the **Van Berkel** and **Shinomiya** cannot be applied to reject claim 5 under 35 U.S.C. § 103.

§ 2142 of the MPEP also provides:

*...the examiner must step backward in time and into the shoes worn by the hypothetical ‘person of ordinary skill in the art’ when the invention was unknown and just before it was made.....The examiner must put aside knowledge of the applicant’s disclosure, refrain from using hindsight, and consider the subject matter claimed ‘as a whole’.*

Here, neither **Van Berkel** nor **Shinomiya** teaches, or even suggests, the desirability of the combination since neither teaches the specific arrangement that includes distribution of facet angles and the angular diffusion profile as specified above and as claimed in claim 5.

Thus, it is clear that neither patent provides any incentive or motivation

supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. § 103 rejection.

In this context, the MPEP further provides at § 2143.01:

*The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.*

In the above context, the courts have repeatedly held that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination.

In the present case it is clear that the examiner's combination arises solely from hindsight based on the invention without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 5. Therefore, for this mutually exclusive reason, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection under 35 U.S.C. §103 should be withdrawn.

Accordingly, claim 5 is allowable and an early formal notice thereof is requested. Dependent claims 6-9 and 11 depend from and further limit independent claim 5 and therefore are allowable as well. The 35 U.S.C. § 103(a) rejection thereof has now been overcome.

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Shinomiya** in view of **Van Berkel**. With respect to claim 4, Applicant respectfully traverses this rejection for at least the following reason. Dependent claim 4 depends from and further limits independent claim 1 and therefore is allowable as well. The 35 U.S.C. §103(a) rejection has now been overcome.

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Shinomiya** in view of **Battersby**, US 6,069,650. With respect to claim 3, Applicant respectfully traverses this rejection for at least the following reason. Dependent claim 3 depends from and further limits independent claim 1 and therefore is allowable as well. The 35 U.S.C. §103(a) rejection has now been overcome.

Claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Shinomiya** in view of **Van Berkel** and further in view of **Battersby**. With respect to claim 10, Applicant respectfully traverses this rejection for at least the following reason. Dependent claim 10 depends from and further limits independent claim 5 and therefore is allowable as well. The 35 U.S.C. §103(a) rejection has now been overcome.

### **Conclusion**

Except as indicated herein, the claims were not amended in order to address issues of patentability and Applicants respectfully reserve all rights they may have under the Doctrine of Equivalents. Applicants furthermore reserve their right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or a continuation application.



It is clear from all of the foregoing that independent claims 1 and 5 are in condition for allowance. Dependent claims 2-4 and 6-11 depend from and further limit independent claims 1 and 5, respectively, and therefore are allowable as well.

The amendments herein are fully supported by the original specification and drawings; therefore, no new matter is introduced. An early formal notice of allowance of claims 1-11 is requested.

Respectfully submitted,



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#### ATTACHMENTS

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